Problem Set 4

# Motivation of Multi-threaded Program.

# All solutions were run on VScode.

# (20 points) Cohort Exercise 1:

# List down at least three places in your group project that may need to be parallelized.

# You can describe it in pseudocode and/or plain text.

# We can use a thread to preload the pdfs of the floor layout when the user is in the menu.

# When the user is in the DisplayPDF.java screen, we can start a thread that scans all the networks around us and find an average of the RSSI signals to get a better reading of the signal strength and so the User does not have to wait for the phone to scan all the nearest Wifi AP’s. This takes around 3 seconds which can be long for the user.

# We can split up the work in calculating the nearest Wifi AP’s are the closest to us.

# Write Multi-threaded Program.

# Main tread

# Sets variables

# Creates tread

# Join tread

# Tread

# Sets variables

# Scans for nearest wifi locations

# Returns nearest wifi locations

# (10 points) Cohort Exercise 2:

Name Your Solution: FactorThreadNoInterrupt.java

# (10 points) Cohort Exercise 3:

Name Your Solution: FactorThread.java

# Demonstrate Issues of Multi-threaded Program.

There is increased multithreaded complexity. Additionally, we need to handle the problem of visibility, since our

FactorThread.interrupt

Has to refer to the main thread if not each thread will not have the visibility of the interrupt stop signal.

# (10 points) Cohort Exercise 4:

Name Your Solution: DiningPhilDemo.java